

the native hazel, gooseberry and currant as above mentioned, all affected by a mite which has every appearance of being the same, lends colour to the probability that the three forms found in England are not good species and would be transferable from one host to another. That this is what happens at Agassiz I have very little doubt.

In 1906 the late George Masee conducted some experiments at Wisley Gardens, England, with a view to testing the possibility of transferring the mite on the hazel, (*C. avellana*) to the cultivated black currant. The plan of his experiment, with which the writer had the pleasure of assisting, was to plant alternate bushes of infected hazels and clean black currants at a distance of about four feet and to observe if by ordinary means the mite on the hazel would attach itself to the currants.

Although the result of the experiment pointed to the immunity of the currant from the hazel mite the test was not sufficiently long or thorough for positive proof on that point.

That the hazel *C. californica* is the original and chief host of this pest in British Columbia there is little doubt. It is the exception and not the rule to find a bush of *Ribes* affected. On the South-eastern portion of Vancouver Island, where the hazel is quite scarce, I have never found the mite on either this shrub or on any *Ribes* sp. (with the exception of the previously-mentioned instance where the European mite had escaped), while at Agassiz the hazel is very common and is everywhere badly affected, in some cases 75% of the buds being arrested in development by the work of the mite.

Some European hazels on the Dominion Experimental Farm at Agassiz were also found to be affected by bud mites; whether imported with them on recent migrants from the neighboring woods it would be difficult to say.

The fact that this pest, which apparently lives on both hazel and currant, and is strongly entrenched in the Lower Fraser Valley, will have a retarding influence on the planting of these districts with small fruits, especially black currants; and it would certainly be folly to let any large acreage be planted until more investigational work has been done on this pest, and the fact that it will not affect the cultivated varieties of black currant and gooseberry has been proven beyond all doubt.

NEW RHOPALOCERA FROM THE FAR EAST.

BY WARO NAKAHARA, A.M., PH.D.

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Leptidia inornata, n. sp.

Related to *L. amurensis* Mén.; both wings broader; upperside of fore wing devoid of the apical dark patch.

Male.—Wings broad, much broader than in *L. amurensis*; rounded at the apex. Upperside soft silky white, without markings except a dark suffusion along the anterior margin toward the base of the fore wing. Underside similar to the upperside in fore wing; hind wing with two nebular groups of dark atoms in the limbal area; the larger one extending from the 2nd to the 4th interspace, paralleling the hind margin, and the other, smaller one from the anterior angle obliquely toward the middle of the 5th interspace.

Expanse.— $1\frac{7}{8}$ inches.

Holotype.—♀, Sapporo, Hokkaido, Japan, July 18, 1916, (S. Kuwayama). Type in the collection of the author.

On account of its broad wings, this species resembles a certain form of *Pieris napi* L., and in fact it has often been so identified. In his list of the butterflies of Hokkaido, Mr. S. Kuwayama refers to this species as *P. napi* saying that it is not rare in that Island, but not found in the Main Island of Japan. In reality, this species belong to the genus *Leptidia*, as can be easily told by the small size of the discal cells of the wings.

***Polygonia asakurai*, n. sp.**

Very close to *P. c-album* L.; black markings above generally heavier; a distinct black belt in the limbal area of hind wing; the white mark in middle of hind wing beneath V-shaped, with its arms widely open.

Male.—Fore wing above fulvous with an elongated black patch across the cell and at the end a larger patch of similar shape; an elongated sub-apical patch on the costa and one on the inner margin well separated; a row of three round spots running from the inner margin toward the lower end of the sub-apical patch, the first spot, which is cut by the vein II, being the largest; outer border blackish brown. Hind wing fulvous with three conspicuous black patches of about the same size in the discal area; a row of black spots forming a belt in the limbal area, running from the costal margin toward the anal angle; this belt and the dark brown outer border enclose a submarginal row of fulvous spots. Underside marbled with various shades of brown and ochre, and streaked with fine dark brown lines; the discal band across the wings irregular and indistinct. Fore wing with a grayish white patch on the costa externally to the discal band; a row of elongated olivaceous spots before the outer margin. The similar olivaceous spots less distinct in hind wing; a limbal series of round olivaceous spots; the discal band marked with an interrupted wavy black line on each side; the white mark in the middle V-shaped, with its arms of about equal length opening widely to form an angle of about 135 degrees.

Expanse.— $1\frac{3}{4}$ inches.

Holotype.—♀, Horisha, Formosa, (K. Asakura), April 23, 1919. Type in the author's collection.

***Oeneis pseudosatyra*, n. sp.**

Related to *O. nanna* Mén.; wings wood brown; eye-spots pupiled with purplish white. Hind wing beneath without eye-spots; an ill-defined dark wavy belt accompanied by a grayish cloud across the wing; no grayish markings in the basal area.

Male.—Upperside of fore wing wood brown, darker toward the base; an eye-spot, pupiled with purplish white, in the 2nd, and a larger one in the 5th interspace; brownish ring around the eye-spot indistinct. Hind wing similarly coloured, with four eye-spots similar to those of fore wing, the eye-spot in the 4th interspace much smaller than others, the one in the 2nd interspace being the largest. Underside a little lighter. Fore wing with the eye-spots of the upperside repeated; a faint dark submarginal line, and another one across the limbal area; a short, dark bar at the end of the cell; a grayish patch at the apex, whence it extends in a very narrow line half way along the outer margin. Hind

wing with an irregular dark brown belt, accompanied externally by a grayish nebular band, running from the middle of the costal margin to the anal angle; the row of eye-spots of the upperside replaced by a dark, regularly wavy sub-marginal belt; a grayish patch on the anterior angle, extending for a short distance along the anterior margin; another grayish patch at the end of the cell; the outer margin narrowly bordered with grayish.

Expanse.—1 $\frac{4}{5}$ inches.

Holotype.—♂, Horisha, Formosa, August 13, 1919, (K. Asakura). Type in the collection of the author.

The wood brown colour of the wing, closely resembling that of *Satyrus* marks this species very well in the genus *Oeneis*. This singular species of *Oeneis* forms an exception in this genus of "Arctics," on account of its occurrence in subtropical territory.

A NEW APHODIUS FROM BRITISH COLUMBIA. (COLEOPTERA-SCARABÆIDÆ).

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Aphodius canadensis, sp. nov.

Form moderately elongate and convex, twice as long as wide, (form similar to that of *A. aleutus* var. *ursinus* Motsch.); black, shining, side margins of thorax a faint reddish-brown (wider at anterior angle), front margin of thorax narrowly yellow, sides of head with a faint brownish lustre, femora piceous, tibiæ rufo-piceous, tarsi paler. Antennæ rufo-testaceous, the club darker; palpi pale. Head moderately convex, an elevated tubercle at middle, and a small flattened tubercle on each side at the angulation of the clypeal suture; the suture elevated on each side from the angulation to the lateral margin; surface punctulate, more finely at middle, coarser on the sides and base; clypeus broadly and deeply emarginate, the angles on each side obtuse and rounded, the sides arcuate, the genæ more prominent than the eyes, fimbriate laterally, the fimbriations longer beneath the genæ, plainly visible from above. Thorax convex, broader at base than apex, narrowly margined, not explanate, sides slightly arcuate and finely fimbriate; hind angles broadly rounded, apical margin straight, base arcuate; disc finely closely punctate, intermixed on basal half and at sides with small cribrations; basal line distinct. Scutellum small, the base moderately closely punctured, the apex smooth. Elytra a little wider behind the middle, slightly narrower than the thorax at their junction, epipleuræ fimbriate on the basal third; disc glabrous, coarsely striate, the striæ strongly densely punctured on the basal three-quarters, less strongly apically; intervals nearly flat and finely closely punctured. Abdomen closely punctured, the punctures bearing rather coarse hairs. Mesosternum very prominently carinate between the coxæ, opaque and alutaceous in front. Anterior tibiæ punctate on the anterior face, the punctures setigerous and placed in a straight line from base to apex and nearer the outer edge; also a few terminal and lateral punctures; acutely tridentate, distinctly crenate above the basal tooth. First joint of anterior tarsus equal to the second. Posterior tibiæ stout, the posterior marginal fimbriations